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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,327	12/09/2004	Roland Brandl	AT02 0034 US	2949

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EXAMINER

PATEL, DHARTI HARIDAS

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

18

<b>Office Action Summary</b>	<b>Application No.</b> 10/517,327	<b>Applicant(s)</b> BRANDL, ROLAND	
	<b>Examiner</b> Dharti H. Patel	<b>Art Unit</b> 2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

DETAILED ACTION

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the acknowledged prior art, in view of Sheu, Patent No. 6,593,597. With respect to claim 1, applicant's acknowledged prior art [Fig. 1] teaches a data carrier [Fig. 1, 1] that includes an integrated circuit [Fig. 1, 5] which comprises a first terminal and a second terminal [Fig. 1, 6, 7], wherein the two terminals are provided for connection with transmission means [Fig. 1, 2] of the data carrier and an ESD protection circuit [Fig. 1, 8], which is connected between the two terminals [Fig. 1, 6, 7] and which comprises a series connection [Fig. 1, 9] consisting of a first protection diode [Fig. 1, 10] and a protection stage [Fig. 1, 11], which protection stage may be brought from a blocking state into a conductive state by exceeding a voltage threshold, and a rectifier circuit [Fig. 1, 13], which is connected to the ESD protection circuit [Fig. 1, 8] and comprises a rectifier diode [Fig. 1, 14] connected in parallel with the ESD protection circuit as disclosed in Specifications, Page 4, lines 9-18, 24-27, 32-33 and Fig. 1.

However, the prior art fails to teach or suggest that a rectifier diode of the rectifier circuit takes the form of a Schottky diode with a parasitic p/n junction and

wherein the Schottky diode with the parasitic p/n junction forms a second protection diode of the ESD protection circuit.

Sheu teaches a light-emitting diode with electrostatic discharge protection capacity. Sheu teaches a first protection diode [Fig. 2A, 30, Fig. 3A] and a second protection diode [Fig. 2A, 40, Fig. 3A] of the ESD protection circuit connected between a power supply [Fig. 2A, V+] and a ground [Fig. 2A, V-] as disclosed in Fig. 2A, Fig. 3A and Col. 5, lines 39-44].

Both teachings are analogous electrostatic discharge protection circuits. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sheu, which teaches a Schottky diode as a second protection diode of the ESD protection circuit, with the integrated circuit for a data carrier of the applicant's acknowledged prior art because any abnormal reverse voltage applied to the LED system turns on the Schottky diode and diverts a large portion of any abnormal reverse current away via the Schottky diode. Schottky diodes are well known for their ability to handle large reverse currents with negative effects.

With respect to claim 2, the acknowledged prior art teaches that the rectifier circuit [Fig. 1, 13] takes the form of a voltage doubler circuit [Specifications, Page 4, line 34].

With respect to claim 3, applicant's acknowledged prior art [Fig. 1] teaches a data carrier [Fig. 1, 1] for contactless communication with a communications stations, which data carrier comprises transmission means [Fig. 1, 2,

Specification, Page 4, lines 1-6] and an integrated circuit [Fig. 1, 5] connected with the transmission means, which integrated circuit comprises a first terminal and a second terminal [Fig. 1, 6, 7], wherein the two terminals are provided for connection with transmission means [Fig. 1, 2] of the data carrier and an ESD protection circuit [Fig. 1, 8], which is connected between the two terminals [Fig. 1, 6, 7] and which comprises a series connection [Fig. 1, 9] consisting of a first protection diode [Fig. 1, 10] and a protection stage [Fig. 1, 11], which protection stage may be brought from a blocking state into a conductive state by exceeding a voltage threshold, and a rectifier circuit [Fig. 1, 13], which is connected to the ESD protection circuit [Fig. 1, 8] and comprises a rectifier diode [Fig. 1, 14] connected in parallel with the ESD protection circuit as disclosed in Specifications, Page 4, lines 9-18, 24-27, 32-33 and Fig. 1. Claim 3 differs from claim 1 by having a data carrier for contactless communication with a communications station. The teachings of Sheu would apply to reject claim 3.

With respect to claim 4, the acknowledged prior art [Fig. 1] teaches that the rectifier circuit [Fig. 1, 13] takes the form of a voltage doubler circuit [Specifications, Page 4, line 34].

With respect to claim 5, applicant's acknowledged prior art [Fig. 1] teaches an integrated circuit [Fig. 1, 5] comprising an ESD protection circuit [Fig. 1, 8] coupled between a first node [Fig. 1, 6] and a second node [Fig. 1, 7], the ESD protection circuit having a first diode [Fig. 1, 10] coupled anode-to-cathode between the first node and the second node; and a rectifier circuit [Fig. 1, 13]

coupled between the first node [Fig. 1, 6] and the second node [Fig. 1, 7].

However, the acknowledged prior art does not disclose a rectifier circuit having a Schottky diode, the Schottky diode including a parasitic p/n junction diode coupled anode-to-cathode between the second node and the first node.

Sheu teaches a Schottky diode [Fig. 2A, 40, Fig. 3A] including a parasitic p/n junction diode coupled anode-to-cathode between the second node [Fig. 2A, V-, Fig. 3, V2] and the first node [Fig. 2A, V+, Fig. 3A, V1].

Both teachings are analogous electrostatic discharge protection circuits. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Sheu, which teaches a Schottky diode coupled anode-to-cathode between the second node and the first node, with the integrated circuit for a data carrier of the applicant's acknowledged prior art because any abnormal reverse voltage applied to the LED system turns on the Schottky diode and diverts a large portion of any abnormal reverse current away via the Schottky diode. Schottky diodes are well known for their ability to handle large reverse currents with negative effects.

With respect to claim 6, the acknowledged prior art teaches that the first node [Fig. 1, 6] and the second node [Fig. 1, 7] are connected to a dipole antenna [Fig. 1, 3].

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-4 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2836

3. **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dharti H. Patel whose telephone number is 571-272-8659. The examiner can normally be reached on 8:30am - 5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800, Ext. 36. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DHP  
04/01/2006



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